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ABSTRACT

This field tested instructional package is intended to develop within the student an understanding of the significant time periods and major events in the history of industry. Defining behavioral objectives, the course description includes a media section, suggested classroom activities, and student evaluation materials, as well as the basic information section. Included in the package are the five periods of the development of industry and examples of major events in each period. These are listed to familiarize the student with the history of industry. The student is asked to delect one period in history and construct a model of his choice that will explain an event, duplicate a machine, experiment, or a discovery from that time period. (Author/MW)

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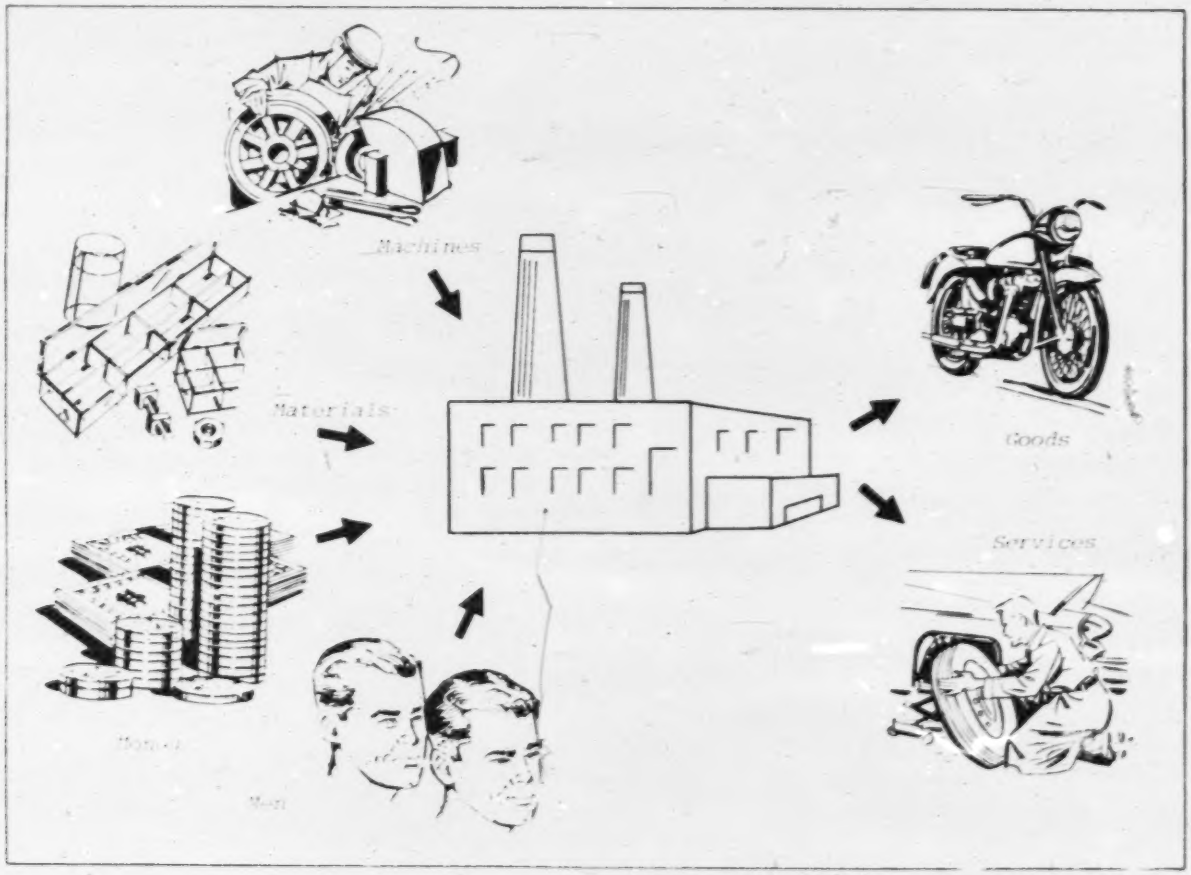
THE DEVELOPMENT OF INDUSTRY



Prepared as an Aid in Implementing
The Wisconsin Guide to Local Curriculum
Improvement in Industrial Education, K-12

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Learning Activity Package

Prepared as an Aid in Implementing
The Wisconsin Guide to Local Curriculum
Improvement in Industrial Education, K-12

The Development of Industry

Junior-Middle High School

Pertaining to Field Objective Number Three

"To provide students the opportunity to explore the context in which industry has developed and continues to develop."

Produced by

The Industrial Education Instructional
Materials Development Project
University of Wisconsin-Stout
Menomonie, Wisconsin

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University of Wisconsin-Stout

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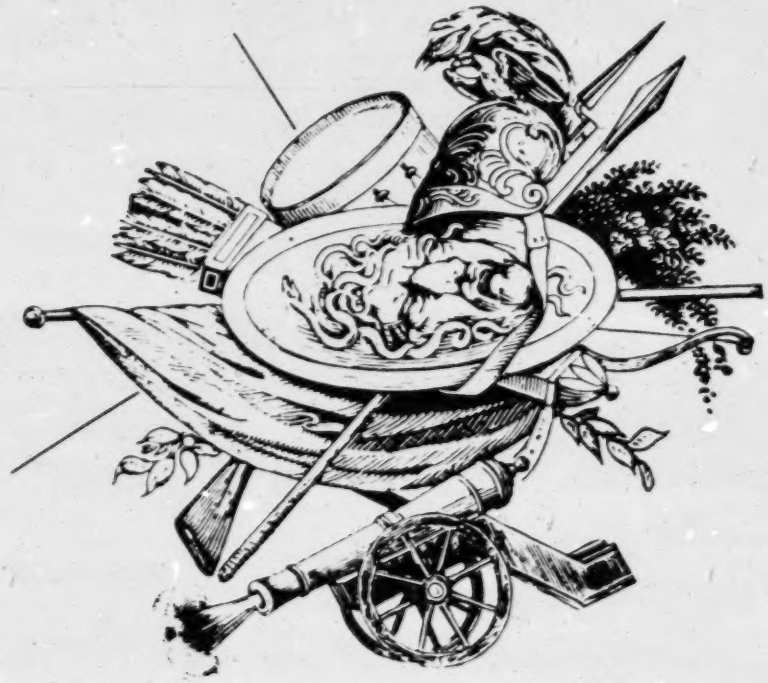
RATIONALE:

Before any study of modern industry can be made, you must have a basic knowledge of important events that have taken place in the evolution of industry. This lesson is designed to help you become aware of some of the major periods in the history of industry and to help you identify significant industrial events in each period that are of interest to you.



*Go on to the next page and read the objectives carefully!!

OBJECTIVES:

Terminal Objective:

You will develop an understanding and knowledge of the significant time periods and major events in the history of industry.

Enabling Objectives:

1. Without the aid of resources, you will list in writing the five periods of development in the history of industry.

2. Using any resources available, you will identify and list four significant industrial events that have taken place in each of the five periods.

3. You will select one period in the history of industry and construct a model of your choice that will explain an event, or duplicate a machine, experiment, or discovery of that time period.

Options: Read the self-test on the following pages and then check the following selections that apply to you.

___ If you feel you can meet the above objectives:

___ A. See the instructor for a teacher evaluation

___ B. Take the self-test as a self evaluating device, then see your instructor.

___ If you feel you cannot meet the above objectives:

___ A. Take the self-test to see what objectives your studying should be based upon, then turn to the media section on page 4.

___ B. Skip the self-test and turn to the media section on page 4 to help you achieve the objectives.

Self-Test

1. Without the aid of resources, recall and list the five historical periods of industry. Use the space provided below for your answers.

   Period I -

   Period II -

   Period III -

   Period IV -

   Period V -

2. Using any resources available, list four significant industrial events that occurred in each of the five periods of the history of industry.

   I. 1. 3.
      2. 4.

   II. 1. 3.
      2. 4.

   III. 1. 3.
      2. 4.

   IV. 1. 3.
      2. 4.

   V. 1. 3.
      2. 4.

MEDIA SECTION

Check your selections.

___ 1. Listen to the presentation given by the instructor on the history of technology (date to be announced).

___ 2. View the film entitled: "The Story of Productivity"
Rental fee - free
Time - 28 min.
Black & White

Contact: The Do All Company Film Librarian
254 North Laurel Avenue
Des Plaines, Illinois 60016

___ 3. Read pages 5 and 6 of this package and one other reference from the sources below.

Read from these suggested sources.

___ 1. American Battle for Abundance, by Kettering and Orth; pages 5-11, 20-22, 32-34, and 54-58.

___ 2. The World of Manufacturing by Lux and Ray; pages 9-17.

___ 3. Teaching Children about Technology by Scobey.

___ 4. Any other sources approved by the instructor.

See your instructor before proceeding with your selections.

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INFORMATION SECTION

Summary of Industrial Time Periods:

Five periods have been identified in the evolution of industry.

These periods range in time from the primitive period (1500 B.C. and earlier) to the Atomic and Space Age period (twentieth century).

The first time period is the primitive period that was in existence from about 1500 B.C. to 500 A.D. During this period man used his technological abilities to form crude tools from chipped pieces of stone, and to provide shelter and clothes from animal skins.

As man grew more skillful in his abilities, industry also grew into a more specific institution. During the middle ages, 500 A.D. to the 14th century, many men became very skillful in specific crafts. They would sometimes set up shops in their dwellings and produce specific goods that they would trade to others to fulfill their need for goods which they could not produce themselves.

The renaissance was a time for exploration and experimentation. In these years, 1400's to the 1700's, many important voyages, such as the ones by Columbus, aided in the discovery of new routes to increase trade and the demand for certain goods that were obtained from other parts of the world. New inventions, such as Gutenberg's movable typeprinting press,

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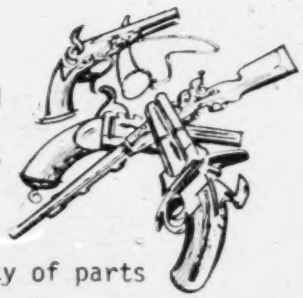
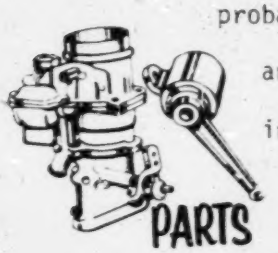
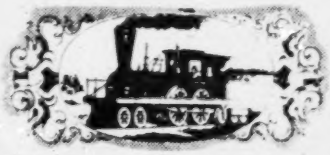
gunpowder, and the sextant, provided a footing for industry to advance even more.



The Industrial Revolution, the most important period in the evolution of industry, (1700's to 1900) blessed us with many innovations. The most important of these was probably the discovery of interchangeability of parts and the steam engine. Man used his new discoveries and inventions in many ways. A change that occurred because of the invention of the steam engine was a movement away from manpower and toward mechanical power. Man adapted this engine to a number of different assemblies constructing automatic machines that were more efficient than anything he had ever been in contact with before. Mechanical power set the scene for our factory system and what is known now as our industrial complexes.

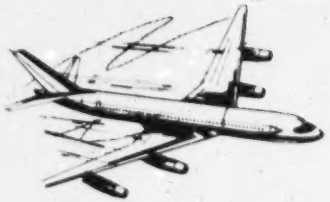




We are now in the atomic and space age (1900's and beyond). Man has experienced the pleasures and conveniences of his machines but is just now realizing that they can also create unforeseen problems. Although it seems that man has pushed his technological abilities to the limits when he created the computer and split the atom, he must now discover new devices and invent other mechanisms to correct the by-problems of pollution and shortages of natural resources he has brought into being.

What industrial advancements do you think will take place in your lifetime?

TIME LINE OF THE DEVELOPMENT OF INDUSTRY



Years	[illegible] B.C.	1000 A.D.	1400 A.D.	1700 A.D.	1900-2000 A.D.
Periods	[illegible]ive	Middle Ages	Renaissance	Industrial Revolution	Atomic and Space Age

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Activity: Production - III

Name _____

Period _____

Directions: To complete this activity you may work with one other class member or you may work by yourself. Select an event, invention, or individual, in one of the five time periods of the evolution of industry, and construct a model, chart or other approved visual media explaining the event. Answer the questions below and submit it to your instructor for approval.

1. Time period selected: _____

2. What event, experiment, invention, or individual have you selected for your project? _____

3. Write a brief statement of the historical background of the event you have selected. Include people, places and dates.

4. How will you simulate the event? (Through role playing, drawings, models, experiments, other) explain below.

5. Will you be able to use your completed work to fulfill requirements for other classes? Yes _____ No _____

Student Evaluation

The Development of Industry

Name _____

Instructor _____

School _____

Directions: Answer all of the following questions to the best of your ability. The questions are written to evaluate your knowledge and understanding of the area of industrial arts covered in this package. Choose the answer which best completes the statement.

1. During which period of industrial development was industry the least separated from man's other activities such as child bearing, recreation, religion, etc.?

   a. Primitive
   b. Renaissance
   c. Industrial Revolution
   d. None of the above

2. The renaissance is important for

   a. The development of mechanical power
   b. The use of assembly lines for production
   c. Experimentation and exploration that laid the base for the Industrial Revolution
   d. The development of crafts

3. A man working in his own shop at a highly skilled craft is most typical of which industrial time period?

   a. Primitive
   b. Atomic and space age
   c. Industrial Revolution
   d. Middle ages

4. In the atomic and space age, man

   a. Consumed resources at a very high rate
   b. Became aware of pollution as a major problem which accompanies industrial development
   c. Developed the factory system of production
   d. All of the above
   e. A and B above

5. The steam engine was an important practical development for use in industry. This development occurred in the

   a. Renaissance
   b. Atomic and space age
   c. Middle ages
   d. Industrial Revolution

6. Automatic machines

   a. Were first used in the Renaissance
   b. Were developed and put to practical use in the Industrial Revolution period
   c. Are still important in industry and are continually being refined and improved
   d. B and C

7. The greatest problems of the atomic and space age have to do with

   a. Wise use of natural resources and unwanted industrial by-products such as pollution.
   b. Improving methods of production for greater output
   c. Exploration of new frontiers such as space and the ocean floor
   d. Taming nature

8. Most of the great discoveries have already been made so there are fewer opportunities for new ideas and inventions today.

   a. True
   b. False

9. The development of the ability to interchange parts was necessary before assembly line methods of mass production could be used.

   a. True
   b. False

10. The period in which man was most likely to be able to be self-sufficient in meeting his requirements for material goods was

   a. The primitive period
   b. The middle ages
   c. The Industrial Revolution
   d. The Renaissance